

What is claimed is:

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1. A method of enhancing sensitivity and specificity of an assay measuring enzymatic activity in a sample comprising measuring enzymatic activity in the sample in the presence and absence of a specific inhibitor of the enzymatic activity.
2. A method of measuring carboxypeptidase A levels in a biological fluid comprising:
- (a) contacting a biological fluid with a carboxypeptidase A substrate in the presence and absence of a carboxypeptidase A specific inhibitor; and
- (b) measuring changes in optical density resulting from hydrolysis of the carboxypeptidase A substrate by carboxypeptidase A in the biological fluid in the presence and absence of the carboxypeptidase A specific inhibitor.
3. A method of diagnosing acute pancreatitis in a patient suspected of suffering from acute pancreatitis comprising:
- (a) measuring carboxypeptidase A levels in a biological fluid from a patient by detecting changes in optical density resulting from hydrolysis of a carboxypeptidase A substrate by any carboxypeptidase A in the biological fluid in the presence and absence of a carboxypeptidase A specific inhibitor; and
- (b) determining whether the measured levels of carboxypeptidase A in the biological fluid of the patient are elevated over levels in biological fluid from a healthy control population.
4. A method of measuring total carboxypeptidase A levels in a biological fluid comprising:
- (a) converting any procarboxypeptidase A in a biological fluid to carboxypeptidase A by addition of clostripain;
- (b) contacting the biological fluid with a carboxypeptidase A substrate in the presence and absence of a carboxypeptidase A specific inhibitor; and
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(c) measuring changes in optical density resulting from hydrolysis of the carboxypeptidase A substrate by carboxypeptidase A in the biological fluid in the presence and absence of the carboxypeptidase A specific inhibitor.

5 27. A method of diagnosing early stage pancreatic cancer in a patient comprising:

(a) converting any procarboxypeptidase A in a biological fluid obtained from a patient to carboxypeptidase A by addition of clostripain;

10 (b) measuring total carboxypeptidase A levels in the biological fluid by detecting changes in optical density resulting from hydrolysis of a carboxypeptidase A substrate by any carboxypeptidase A in the biological fluid in the presence and absence of a carboxypeptidase A specific inhibitor; and

15 (c) determining whether the measured levels of total carboxypeptidase A in the biological fluid of the patient are increased as compared to total carboxypeptidase A levels in a healthy population due to elevated procarboxypeptidase A in the biological fluid.

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